

**EMERGENCY PREPAREDNESS AND CONTINGENCY PLAN**

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**DEFINITIONS:**

AWAR—Animal Welfare Act and Regulations  
CO<sub>2</sub>—Carbon Dioxide  
HVAC—Heating, Ventilation and Air Conditioning  
IACUC—Institutional Animal Care and Use Committee  
LUCOM—Liberty University College of Osteopathic Medicine  
LUPD—Liberty University Police Department  
MS-222—Tricaine mesylate  
PHS Policy—Public Health Service Policy  
PPE—Personal Protective Equipment

**I. PURPOSE, SCOPE AND GOALS**

**Purpose:** This document provides an overall plan of action in the event of an emergency that may impact the animal care and use facilities that house research and teaching animals at Liberty University.

**Scope:** The plans outlined in this document shall cover all facilities in which animals are housed under the auspices of Liberty University, with oversight from the IACUC.

**Goal:** To provide an adequate, encompassing plan regarding the humane care, treatment, transportation, housing, and care of all animals under the auspices of Liberty University in order to ensure the health, safety, and welfare of employees, faculty, staff, and animals.

**II. BACKGROUND INFORMATION**

Documentation of emergency preparedness and contingency plans for all University animal facilities is required by the Public Health Service Policy (PHS Policy), the Guide for the Care and Use of Laboratory Animals (the Guide), and the Animal Welfare Act Regulations (AWAR).

**III. POSSIBLE EMERGENCY SITUATIONS**

Possible emergency situations could include any of the following: extended loss of power, contamination or loss of water supply, sustained HVAC system failure, fire, flooding, or other natural disasters. Other emergency situations could include any instances in which staff are unable to report to work, including animal rights incursions or civil disobedience.

**IV. ACTION PLANS**

The following plan has been developed and approved by the Liberty University Institutional Animal Care and Use Committee. Campus law enforcement (LUPD) and other applicable campus personnel shall have access to this document at all times.

**1. Emergency Personnel Contact Information**

- a. The information provided below shall be used in the event of an emergency requiring the implementation of this emergency action plan:

Essential Personnel	Phone Number	Email Address
Barb Lutz, Research Manager (LUCOM)	434-592-7754	blutz1@liberty.edu
Dr. Matthew Lazenka, Vivarium Manager (CNS)	434-582-2525	mflazenka@liberty.edu
Stacy Johnson, Director of Operations (SCI)	434-592-6299	ssstevens1@liberty.edu
Kevin Bolden, Director of Operations (LUCOM)	434-582-7734	klbolden2@liberty.edu
Dr. Anthony Pearson, University Veterinarian	540-558-8768	apearson2012@gmail.com
Dr. R. James Swanson, IACUC Chair	434-592-6733	rjswanson@liberty.edu
Connor Bryant, Admin. Chair Animal/Biosafety	434-582-2827	cabryant@liberty.edu
Greg Bennett, Health & Environmental Safety	434-582-2261	lusafety@liberty.edu
Vickey Jaynes, Office of Risk Management	434-592-6446	vojaynes@liberty.edu

If personnel are not reachable by the above information, no contingency plan is in place aside from contacting LUPD. Public sources of communication would be employed to attempt to contact personnel in the event the above contact methods are unavailable.

## **2. Triage**

- a. Be aware of all surroundings, NEVER endanger your personal safety.
- b. Obtain information and evaluate the overall situation before taking additional action(s).
- c. If advanced notice is given (e.g., weather):
  - i. Evaluate supplies and respond appropriately if low.
  - ii. Researchers, in consultation with the attending veterinarian, shall decide which animals are considered “irreplaceable or critical to save,” if possible, since many animals may not be able to be evacuated.
    1. If such animals are identified, they must be prioritized for transport to an alternate, secure facility if it is safe to do so.
- d. If the emergent situation results in down-time that is less than 24 hours, on-site housing shall be the standard.
- e. If the emergent situation results in downtime that is greater than 24 hours and the ability to care for animals is significantly impacted or impaired, animals shall be evacuated or euthanized depending on the nature of the situation, probable return to normal, and at the discretion of the facility manager and attending veterinarian.
- f. Status of the animals must be evaluated as soon as possible by the responsible facility manager(s).
  - i. Dead animals shall be collected and appropriately disposed of.
  - ii. Surviving animals shall be examined, treated, and provided with clean food, water, and housing as soon as possible.

## **3. General Provisions for Animal Care & Maintenance**

- a. The following are to be provided either in advance (if advanced warning is given) or following permission to enter the building after the situation is all clear.
- b. Food
  - i. If food is uncontaminated, fill all food containers in animal rooms with food.
  - ii. If food is contaminated, more food must be delivered or picked up from an approved food vendor or, in an emergency, from PetSmart.
- c. Water
  - i. If water is uncontaminated, fill all water bottles in animal rooms with water.
  - ii. If water is contaminated, it can be autoclaved if power is available, or bottled water may be purchased and provided to the animals.
- d. Power Failure
  - i. In the event of a power failure, contact the appropriate Director of Operations (see above contact list). Back-up generators should supply electricity to the heating, ventilation, and air conditioning (HVAC) system, lighting, and other electronic devices within the animal facilities.
    1. If applicable, verify that all animal cage racks are provided with power from the back-up generators. If power is unavailable, open doors to animal rooms to provide ventilation.

## **4. Campus-Wide Animal Evacuation Plans**

- a. Animals should be relocated to on-site rooms or buildings with the goal of continuing routine animal care practices. Available space should be evaluated in terms of strengths and weaknesses in accommodating the species in question (equipment needed, staff, space).
  - i. As a general rule, if the LUCOM vivarium is compromised, animals should be moved to the Science Building vivarium. If the Science Building vivarium is compromised, animals should be moved to the LUCOM vivarium.
- b. If animals must be evacuated off-site, and it is proper and safe to do so, the following facility may be available if unaffected by the emergency:
  - i. Animal Medical Center
    - 1. 18479 Forest Rd, Lynchburg VA 24502
    - 2. 434-385-8937
- c. The transportation of animals will have to be done using personal vehicles or cargo vans. All vehicles must be temperature controlled, clean, and safe for the animals. Filtered cages should be used if available and all caging must be secured to prevent tipping.

## **5. Euthanasia of Animals**

- a. In the event that all other methods of evacuation have been exhausted, the facility manager or attending veterinarian can order that animals be humanely euthanized by a properly trained individual(s). Factors that affect the decision to euthanize the animals include
  - i. Pain and distress
  - ii. Animals' health/status is beyond rescue
  - iii. Availability of feed, caging, rooms, environment, or species requirements
  - iv. Investigator input, unless suffering as determined by veterinarian or facility manager
  - v. Loose or unidentified animals
- b. If euthanasia is necessary, it should be performed using one of the following methods:
  - i. CO<sub>2</sub> inhalation/cervical dislocation (rodents)
  - ii. Overdose of isoflurane anesthesia
  - iii. MS-222 (fish/amphibians)

## **6. Aquatic Animals**

- a. Aquatic System Failures
  - i. All zebrafish are maintained either within incubators, benchtop systems, or within individual aquaria with filters. In the case of aquarium system failures, contact the facility manager or responsible PI for assistance.
- b. Loss of Power
  - i. For short term loss of power, ensure that all systems have been properly reset. Timers may need to be adjusted.
  - ii. For power loss that is in excess of 4 hours, emergency power will need to be run to the room/location housing the zebrafish, but only if fish are present.

- c. Lights
  - i. Fish should be maintained on a 14D:10N light schedule. Lights are maintained by room timer. Temporary aquarium lights can be hung on the system and put on timers until room lighting is fixed.
- d. Temperature
  - i. Zebrafish need to be maintained at 26-28C (78-82F). If temperature falls below 24C, individual aquarium heaters should be placed in any quarantine tanks, and a temporary space heater could be used to help maintain room temperature.

## **V. MATERIALS AND RESOURCES**

- a. A supply of food, bedding, and PPE must be maintained in the animal facility at all times.
- b. Adequate euthanasia and medical supplies must be on hand for all animals currently housed in the facility.
- c. The following emergency supplies should be stored and readily accessible in the animal facilities:
  - i. Flashlights or headlamps
  - ii. Batteries
  - iii. First aid
- d. Ensure that all appropriate personnel have necessary access and keys in the event of an emergency.
- e. Create and maintain census information of all animals, rooms, investigator contacts and protocol numbers.

## **VI. TRAINING**

- a. Essential personnel must participate in training regarding their roles and responsibilities as outlined in this plan. New staff must be trained within 30 days of hire, and all staff must be trained within 30 days of any changes.
- b. Animal care staff must be instructed that responding to emergencies is a condition of their employment and that they will be held accountable should they fail to care properly for the animals.
- c. The plan must be updated annually and changes must be communicated to all personnel within 30 days of the change.

## **VII. RESPONSE AND RECOVERY OPTIONS**

- a. Once entry into the animal facility is permitted, environmental conditions must be evaluated and recommendations communicated if conditions need to be improved or modified.
- b. Locate areas of known hazards (or animals injected with hazards); stabilize these locations and animals first.
- c. Animal health assessments should be completed in order to provide critical care and maintain biosecurity. Triage all animal survivors and classify them into categories of health and exposures to environmental conditions outside of the cage. Remove animal carcasses and store for disposal.

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- d. Conduct a brief animal inventory to assess the potential for escapes or for unaccounted animals.
- e. Provide animal enclosure cleaning as necessary to minimize animals being in wet or dirty cages. If equipment or power failure still exists, hand sanitation of caging or other equipment with a diluted bleach solution and rinse may be necessary.
- f. Factors that affect the decision to euthanize the animals include
  - i. Pain and distress
  - ii. Animals' health/status is beyond rescue
  - iii. Availability of feed, caging, rooms, environment, or species requirements
  - iv. Investigator input, unless suffering as determined by veterinarian or facility manager
  - v. Loose or unidentified animals

TRIAGE FLOWCHART

